

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P314155

Luminaire Tested: **24FCZ2-75HE-UNV-L83050-CP187-W2A-U-3000K**

Issue Date: 3/3/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

Test Information

Test Method: LM-79-08
Report Number: P314155
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-75HE-UNV-L83050-CP187-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.187" POLYCARB SHEET
Light Source: (336) 3000K TUNABLE CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment:

<u>Sample No.</u>	<u>Condition</u>	<u>Description</u>
AS-5443-1	Good	WHITE TWIN R-EVOLVE FLOOD
AS-5443-2	Good	REFLECTOR
AS-5443-3	Good	DRIVER
AS-5443-4	Good	UPPER MODULE
AS-5443-5	Good	LENS
AS-5443-6	Good	DRIVER 2
AS-5443-7	Good	TRIM RING

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6094.0 lumens
Efficiency: N/A
Efficacy: 97.2 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

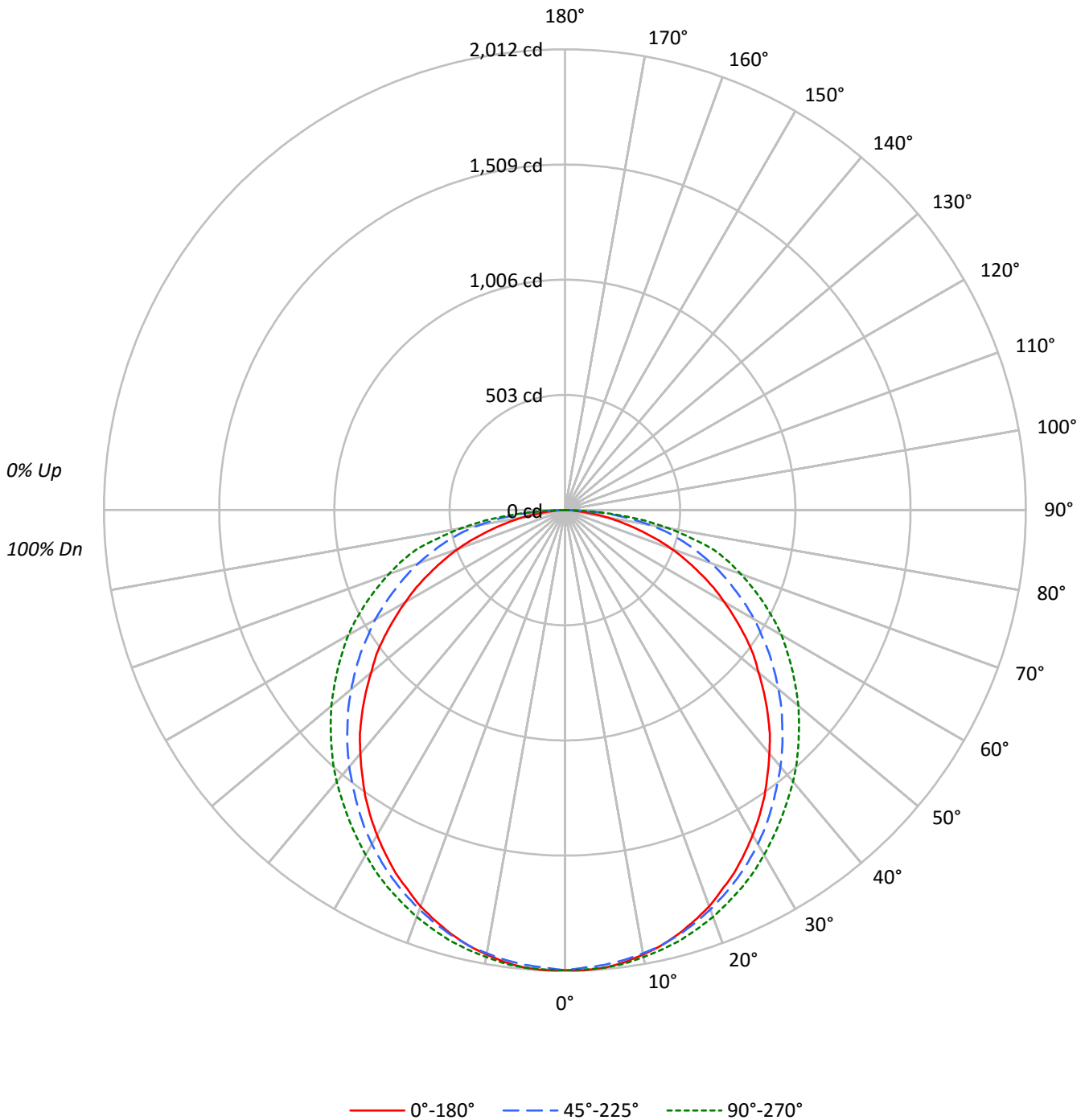
Input Watts (W): 62.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	98	94	105	100	96	92	96	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2704	2704	2704
5°	2709	2693	2709
10°	2693	2685	2707
15°	2670	2676	2709
20°	2637	2658	2707
25°	2596	2638	2704
30°	2547	2617	2701
35°	2497	2590	2703
40°	2440	2571	2720
45°	2381	2555	2743
50°	2311	2548	2785
55°	2253	2552	2841
60°	2165	2573	2938
65°	2066	2600	3045
70°	1957	2681	3213
75°	1745	2796	3511
80°	1488	2961	3587
85°	1061	2935	3433



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	190.2	3.1
10°-20°	543.9	8.9
20°-30°	821.4	13.5
30°-40°	990.0	16.2
40°-50°	1039.3	17.1
50°-60°	972.4	16.0
60°-70°	803.0	13.2
70°-80°	547.2	9.0
80°-90°	186.6	3.1
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1555.5	25.5
0°-40°	2545.5	41.8
0°-60°	4557.2	74.8
0°-90°	6094.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6094.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2010	2010	2010	2010	2010	
5°	2006	2004	1994	2006	2006	190
15°	1917	1919	1921	1941	1945	540
25°	1749	1757	1777	1812	1822	805
35°	1520	1537	1577	1630	1646	950
45°	1252	1278	1342	1415	1442	965
55°	960	999	1088	1177	1211	857
65°	649	704	817	920	956	644
75°	336	412	538	639	675	358
85°	69	136	190	214	222	86
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2009.7	2009.7	2009.7	2009.7	2009.7
2.5°	2011.8	2009.7	1999.6	2009.7	2007.7
5°	2005.7	2003.7	1993.6	2005.7	2005.7
7.5°	1991.6	1991.6	1981.4	1995.6	1997.6
10°	1971.3	1971.3	1965.3	1981.4	1981.4
12.5°	1947.1	1947.1	1947.1	1963.2	1965.3
15°	1916.7	1918.8	1920.8	1941.0	1945.0
17.5°	1880.3	1884.4	1890.5	1914.7	1918.8
20°	1841.9	1846.0	1856.1	1884.4	1890.5
22.5°	1793.4	1803.5	1817.7	1850.0	1856.1
25°	1748.9	1757.0	1777.2	1811.6	1821.7
27.5°	1694.3	1706.5	1732.8	1769.1	1783.3
30°	1639.7	1651.9	1684.2	1726.7	1738.8
32.5°	1581.1	1599.3	1633.7	1678.2	1692.3
35°	1520.5	1536.6	1577.1	1629.6	1645.8
37.5°	1453.7	1476.0	1520.5	1577.1	1597.3
40°	1389.0	1413.3	1463.8	1524.5	1548.8
42.5°	1324.3	1348.6	1405.2	1474.0	1498.2
45°	1251.5	1277.8	1342.5	1415.3	1441.6
47.5°	1178.8	1211.1	1281.9	1358.7	1387.0
50°	1103.9	1140.3	1217.2	1298.0	1330.4
52.5°	1037.2	1071.6	1152.5	1239.4	1269.7
55°	960.4	998.8	1087.8	1176.7	1211.1
57.5°	881.5	924.0	1019.0	1116.1	1150.4
60°	804.7	851.2	956.3	1053.4	1091.8
62.5°	729.9	776.4	885.6	986.7	1025.1
65°	649.0	703.6	816.8	920.0	956.3
67.5°	572.2	630.8	750.1	851.2	887.6
70°	497.4	554.0	681.4	780.4	816.8
72.5°	416.5	481.2	608.6	711.7	750.1
75°	335.6	412.5	537.8	638.9	675.3
77.5°	260.8	339.7	465.0	547.9	566.1
80°	192.1	273.0	382.1	440.8	463.0
82.5°	123.3	204.2	291.2	333.6	351.8
85°	68.7	135.5	190.1	214.3	222.4
87.5°	28.3	58.6	76.8	86.9	86.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)